

IN THE CLAIMS

Current Listing of Claims:

1-12. (Cancelled)

13. (Currently amended) An electroless plating structure on a copper pad, having a composition comprising:



wherein pM is a primary metal consisting of at least one element selected from ~~at least one~~ the group consisting of Cu, Ag, Au, Pd, Pt, Ni, Rh, and Ir;

wherein sM is a secondary metal consisting of at least one element selected from ~~zero to at least one~~ the group consisting of Cr, Mo, W, Mn, Tc, and Re;

wherein B and P represent boron and phosphorus, respectively; and

wherein w has a range from about 0.5 to about 0.99, x has a range from ~~about~~ 0.0 to about 0.2, y has a range from about .01 to about 0.1, and z has a range from ~~about~~ 0.0 to about 0.02.

14. (Cancelled)

15. (Currently amended) The electroless plating structure according to claim 13, wherein ~~the composition of $pM_w sM_x B_y P_z$ is selected from the group consisting of: pMB, pMBP, pMCrB, pMCrBP, pMMoB, pMMoBP, pMWB, pMWBP, pMMnB, pMMnBP, pMTcB, pMTcBP, pMReB, and pMReBP; and pM comprises at least one~~ is a primary metal consisting of at least one element selected from the group consisting of Cu, Ag, and Au.

16. (Currently amended) The electroless plating structure according to claim 13, wherein ~~the composition of $pM_w sM_x B_y P_z$ is selected from the group consisting of: pMB, pMBP, pMCrB, pM_wCrBP, pMMoB, pMMoBP, pMWB, pMWBP, pMMnB, pMMnBP, pMTeB, pMTeBP, pMReB, and pMReBP~~ x has a range from a value approaching but not equal to 0.0 to about 0.02.

17. (Currently amended) The electroless plating structure according to claim 16, wherein ~~pM comprises at least one~~ is a primary metal consisting of at least one element selected from the group consisting of Ni, Pd, and Pt.

18. (Cancelled)

19. (Currently amended) The electroless plating structure according to claim 13, wherein ~~the composition of $pM_w sM_x B_y P_z$ is selected from the group consisting of: pMCrB, pMMnB, pMTeB, and pMReB; and pM comprises at least one~~ is a primary metal consisting of at least one element selected from the group consisting of Co, Rh, and Ir.

20. (Currently amended) The electroless plating structure according to claim 13, wherein ~~the primary metal pM~~ is a metal combination selected from the group consisting of nickel-silver, nickel-silver-copper, nickel-copper, and silver-copper.

21-31. (Cancelled)

32. (Currently amended) An electroless plating structure on a copper pad, having a composition comprising:



wherein pM is a primary metal consisting of at least one element selected from ~~at least one~~ the group consisting of Cu, Ag, Au, Pd, Pt, Ni, Rh, and Ir;

wherein sM is a secondary metal consisting of at least one element selected from ~~zero to at least one~~ the group consisting of Cr, Mo, W, Mn, Tc, and Re;

wherein B and P represent boron and phosphorus, respectively; and

wherein w has a range from about 0.5 to about 0.99, x has a range from ~~about~~ 0.0 to about 0.2, y has a range from about .01 to about 0.1, and z has a range from a value approaching but not equal to 0.0 to about 0.02.

33. (Currently amended) The electroless plating structure according to claim 32, wherein ~~the composition of~~ $pM_w sM_x B_y P_z$ ~~is selected from the group consisting of: pMBP, pMCoBP, pMMoBP, pMWBP, pMMnBP, pMTcBP, and pMReBP~~ x has a range from a value approaching but not equal to 0.0 to about 0.02.

34. (Currently amended) The electroless plating structure according to claim 32, wherein pM ~~comprises at least one~~ is a primary metal consisting of at least one element selected from the group consisting of Co, Rh, and Ir.

35. (Currently amended) An electroless plating structure on a copper pad, having a composition comprising:



wherein sM is a secondary metal consisting of at least one element selected from ~~zero to at least one~~ the group consisting of Cr, Mo, W, Mn, Tc, and Re;

wherein Co, B, and P represent cobalt, boron, and phosphorus, respectively;
and

wherein w has a range from about 0.5 to about 0.99, x has a range from ~~about~~ 0.0 to about 0.2, y has a range from about .01 to about 0.1, and z has a range from a value approaching but not equal to 0.0 to about 0.02.

36. (Previously Presented) The electroless plating structure of claim 35 wherein ~~the composition of Co_wsM_xB_yP_z is selected from the group consisting of: sMCoBP, CoCrBP, CoMoBP, CoWBP, CoMnBP, CoTeBP, and CoReBP~~ x has a range from a value approaching but not equal to 0.0 to about 0.02.

37. (Cancelled)